



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

JAMES H. TROGDON, III  
SECRETARY

June 9, 2017

**Addendum No. 1**

RE: Contract # C204028  
WBS # 2017CPT.08.29.10771,etc  
STATE FUNDED

**Richmond County**

1 Section of NC-38, NC-381 And 7 Sections Of Secondary Roads

**June 20, 2017 Letting**

To Whom It May Concern:

Reference is made to the plans (Sketch Maps) and proposal form furnished to you on this project.

The following revisions have been made to the Sketch Maps:

Sheet No.	Revisions
2	Revised to add new Typical Section No. 3A
5 and 6	Revised to add column for "Microsurfacing" and make various other quantity changes associated with changing Map #2 to Microsurfacing

Please void existing Sheet Nos. 2, 5 and 6 in your plans and staple the revised Sheet Nos. 2, 5 and 6 thereto.

The following revisions have been made to the proposal:

Page No.	Revisions
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 06-09-2017".
Table of Contents	Revised to include the new unit project special provision entitled "Pavement Markings"
New R-34 thru R-39	Added pages to include the project special provision entitled "Microsurfacing"
New PM-1	Added to include the unit project special provision entitled "Hot Spray Thermoplastic Pavement Marking Lines"

Mailing Address:  
NC DEPARTMENT OF TRANSPORTATION  
CONTRACT STANDARDS AND DEVELOPMENT  
1591 MAIL SERVICE CENTER  
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900  
Fax: (919) 250-4127  
Customer Service: 1-877-368-4968

Location:  
1020 BIRCH RIDGE DR.  
RALEIGH, NC 27610

Website: [www.ncdot.gov](http://www.ncdot.gov)

Please void the Proposal Cover and the Table of Contents and staple the revised pages thereto. Please staple New Page Nos. R-34 thru R-39 after existing Page No. R-33. Please staple New Page No. PM-1 after existing Page No. SSP-14

On the item sheets the following pay items have been added and quantities have been revised:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
002-0255000000-E-SP	Aggregate Shoulder Borrow	4,152 TON	3,332 TON
003-1245000000-E-SP	Shoulder Reconstruction	29.62 SMI	23.78 SMI
005-1330000000-E-607	Incidental Milling	1,103 SY	1,003 SY
006-1519000000-E-610	Asphalt Concrete Surface Course, Type S9.5B	11,415 TON	8,070 TON
009-1575000000-E-620	Asphalt Binder For Plant Mix	1,011 TON	810 TON
016-4685000000-E-1205	Thermoplastic Pavement Marking Lines (4",90 MILS)	165,695 LF	134,860 LF
017-4686000000-E-1205	Thermoplastic Pavement Marking Lines (4",120 MILS)	116,228 LF	92,953 LF
020-4900000000-N-1251	Permanent Raised Pavement Markers	621 EA	816 EA
021-4905000000-N-1253	Snowplowable Pavement Markers	425 EA	230 EA
022-1891000000-E-SP	Latex Modified Microsurfacing, Type II	<b>NEW ITEM</b>	36,200 SY
023-4850000000-E-1205	Removal Of Pavement Marking Lines (4")	<b>NEW ITEM</b>	54,110 LF
024-4890000000-E-SP	Hot Spray Thermoplastic Pavement Marking Lines (4", 50 MILS)	<b>NEW ITEM</b>	54,110 LF

The Contractor's bid must include these new pay items and quantity changes.

The Expedite File has been updated to reflect these revisions and additions. Please download the Expedite Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

C204028

Richmond County

Sincerely,

DocuSigned by:  
  
F81B6038A47A442...

Ronald. E. Davenport, Jr., PE  
State Contract Officer

RED/jag  
Attachments

cc: Mr. Lamar Sylvester, PE  
Mr. Brandon Jones, PE  
Mr. Bobby Lewis, PE  
Mr. Ken Kennedy, PE  
Ms. Jaci Kincaid  
Project File (2)

Mr. Ray Arnold, PE  
Ms. Theresa Canales, PE  
Mr. Mike Gwyn  
Ms. Penny Higgins  
Mr. Mitchell Dixon  
Ms. Lori Strickland

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No. 1 DATED 06-09-2017**

DATE AND TIME OF BID OPENING: **JUNE 20, 2017 AT 2:00 PM**

CONTRACT ID C204028  
WBS 2017CPT.08.29.10771, 2017CPT.08.29.20771

FEDERAL-AID NO. STATE FUNDED  
COUNTY RICHMOND  
T.I.P. NO.  
MILES 15.730  
ROUTE NO. NC 38  
LOCATION 1 SECTION OF NC-38, NC-381 AND 7 SECTIONS OF SECONDARY  
ROADS.

TYPE OF WORK MILLING, RESURFACING, AND SHOULDER RECONSTRUCTION.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

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**MICROSURFACING:**

(7-1-95) (Rev. 5-24-13)

SPI 6-18

**Description**

This provision covers the materials, equipment, construction and application procedures for rut filling and/or surfacing of existing paved surfaces in accordance with the contract. The microsurfacing system shall be a mixture of cationic latex modified asphalt emulsion, mineral aggregate, mineral filler, water and other additives, properly proportioned, mixed and spread on the paved surface in accordance with this provision and as directed by the Engineer.

**Materials****(A) Latex Modified Emulsified Asphalt**

The emulsified asphalt shall be a cationic type CSS-1h or CQS-1h and shall conform to AASHTO M 208 or ASTM D2397. In general a 3% polymer solids, based on asphalt weight, is considered minimum. The ring and ball softening point of the residue shall be a minimum of 140°F. It shall show no separation after mixing. The cement mixing test is waived for the latex modified CSS-1h and CQS-1h.

**(B) Mineral Aggregate**

The mineral aggregate used shall be compatible with the latex modified emulsified asphalt and can produce a good skid resistant surface. The aggregate shall meet requirements in Article 1012-1 of the *2012 Standard Specifications*.

**(C) Mineral Filler**

Mineral filler shall be any recognized brand of non-air entrained Portland cement that is free of lumps or hydrated lime meeting the requirements of ASTM D242. It may be accepted upon visual inspection.

**(D) Water**

The water shall be potable and shall be free of harmful soluble salts in accordance with Article 1024-4 of the *2012 Standard Specifications*.

**(E) Latex Modifier**

A latex based modifier, certified from an approved source, along with special emulsifiers shall be milled into the asphalt emulsion by an approved emulsion manufacturer. The latex modified emulsified asphalt shall be so formulated that when the paving mixture is applied at a thickness of one inch it will cure sufficiently so that rolling traffic can be allowed back on the pavement in one hour with no damage to the surface.

**(F) Other Additives**

The additives are any other materials that are added to the emulsion mix or to any of the component materials to provide the specified properties. The additives shall be supplied by the emulsion manufacturer to provide control of the set time in the field.

**Mix Design**

The Contractor shall submit a mix design certified by the latex modified emulsion manufacturer and present certified test results for the Engineer's approval. Compatibility of the aggregate and latex modified CSS-1h or CQS-1h shall be certified. The job mix formula shall provide a minimum Marshall stability of 1,800 pounds and a flow of 6 to 16 units when tested according to modified ASTM procedures. Aggregate used in the job mix formula shall be of the material proposed by the Contractor for use on the project.

Submit mix design to the Materials and Tests Unit for approval. The mix design shall conform to the International Slurry Surfacing Association's ISSA A143, Section 5.2.

The gradation of the aggregate shall be in accordance with the following:

Screen Size	Type II (% passing)	Type III (% passing)	Stockpile Tolerance
3/8"	100	100	
#4	90 - 100	70 - 90	± 5
#8	65 - 90	45 - 70	± 5
#16	45 - 70	28 - 50	± 5
#30	30 - 50	19 - 34	± 5
#50	18 - 30	12 - 25	± 4
#100	10 - 21	7 - 18	± 3
#200	5 - 15	5 - 15	± 2

The gradation of the aggregate stockpile shall not vary by more than the stockpile tolerance from the mix design gradation (indicated in the table above) while also remaining within the specification gradation band. The percentage of aggregate passing any 2 successive sieves shall not change from one end of the specified range to the other end.

The aggregate will be accepted at the job location or stockpile based on 5 gradation tests sampled according to AASHTO T 2. If the average of the 5 tests is within the stockpile tolerance from the mix design gradation, the material will be accepted. If the average of those test results is out of specification or tolerance, the Contractor will be given the choice to either remove the material or blend additional aggregate with the stockpile material to bring it into compliance. Materials used in blending shall meet the required aggregate quality test specifications in Section 1012 of the *2012 Standard Specifications* before blending and shall be blended in a manner to produce a consistent gradation.

Aggregate blending may require a new mix design. Screening shall be required at the stockpile if there are any problems created by oversized materials in the mix.

Type II aggregate gradation is used to fill surface voids, address surface distresses, seal and provide a durable wearing surface.

Type III aggregate gradation provides maximum skid resistance and an improved wearing surface. This type of microsurfacing is appropriate for heavily traveled pavements or for placement on highly textured surfaces requiring larger size aggregate to fill voids. Type III microsurfacing shall be used for rut filling.

The mineral aggregate shall be weighed by means of scale approved by the Engineer before delivery to the job site. Emulsified asphalt shall be weighed by means of approved scales or be measured by volume.

Precautions shall be taken to insure that stockpiles do not become contaminated.

Samples for gradation will be taken from aggregate stockpiles designated by the Contractor for use. Samples for asphalt content shall be taken from the completed mix. Samples of aggregate and filler will be taken at the job site. The frequency of sampling and testing will be established by the Engineer based upon the Department's current acceptance program. The asphalt content will be determined by AASHTO T 308 modified.

### **Equipment**

Use equipment that meets ISSA A143 Section 6.

Each mixing unit to be used in performance of the work shall be calibrated in the presence of the Engineer before beginning the work. Submit calibration documentation to the Engineer. Any equipment replacement affecting material proportioning requires that the machine be recalibrated. No machine will be allowed to work on the project until the calibration has been accepted.

### **Construction Methods**

#### **(A) Weather Limitations**

The material shall be placed only when the surface is dry and the atmospheric and surface temperature is at least 45°F and rising and there is no chance of temperatures below 32°F within 24 hours from the time the material is applied.

#### **(B) Surface Preparation**

Immediately prior to applying the paving mixture the surface shall be thoroughly cleaned of all vegetation, loose materials, dirt, mud, and other deleterious materials. If water is used, cracks shall be allowed to dry thoroughly before applying microsurfacing. Manholes, valve boxes, drop inlets and other service entrances shall be protected from the microsurfacing by a suitable method. Remove all thermoplastic and plastic tape traffic markings, symbols, and characters.

(C) Tack Coat for Microsurfacing

The emulsified asphalt used for tack coat shall be CSS, CQS, CRS or the microsurfacing emulsion diluted to one part emulsified asphalt to two (2) or three (3) parts water, as approved by the Engineer. Consult with the microsurfacing emulsion supplier to determine dilution stability. The distributor shall be capable of applying the diluted tack coat evenly at a rate of 0.08 to 0.15 gallons per square yard as required by the Engineer. The tack coat shall be allowed to cure sufficiently before the application of microsurfacing.

(D) Application

When rutting or deformation is less than 0.5 inch, a full width scratch course may be applied with the spreader box using a metal or stiff rubber strike-off. Apply at a sufficient rate to level the pavement surface. The mixture shall be spread to fill minor cracks, minor surface irregularities, and shallow potholes and leave a uniform high-skid resistant application of aggregate and asphalt on the surface. Approved squeegees shall be used to spread the mixture in areas inaccessible to the spreader box and other areas hand spreading may be required. Ruts that are greater than 0.5 inch depth shall be filled independently by means of a box specifically designed for that purpose. The box shall be 5 to 6 feet in width and have a dual chamber with an inner "V" configuration of augers to channel the large aggregate to the center of the rut and the fines to the edges of the rut fill pass. The box shall be equipped with dual steel strike-off to control both the width and depth of the rut fill. All rut-filling and leveling material should cure under traffic for at least 24 hours before additional material is placed.

A sufficient amount of surface sealer shall be carried to all parts of the spreader box at all times so that complete coverage is obtained. Water in very limited quantity may be sprayed into the spreader box to prevent build-up on the blades to facilitate spreading without harming the mix. No lumping, balling, or unmixed aggregate shall be permitted in the finished surface. Any oversized aggregate or foreign materials shall be screened from the aggregate prior to delivery to the mixing machine. Microsurfacing for the final surface course shall be placed at an application rate of 18 to 22 pounds per square yard for Type II and 22 to 26 pounds per square yard for Type III.

In restricted areas where hand spreading is necessary, slight adjustments to the mix formula may be required to slow setting time. The paving mixture shall be poured into a small windrow along one edge of the surface to be covered. The mixture then shall be spread uniformly by a hand squeegee or lute.

The seam where two passes join shall be neat in appearance and uniform.

All excess material shall be removed from ends of each run immediately on surface course.

(E) Curing

Adequate means shall be provided to protect the microsurfacing from damage by traffic until the mixture has cured sufficiently so that it will not adhere to or be picked up by the tire of vehicles. Normally, microsurfacing accepts straight rolling traffic on a 0.5 inch

thick surface within one hour after placement. Stopping and starting traffic may require additional curing time. All rut-filling and level-up material and first lift in two lift areas should cure under traffic for at least 24 hours before additional material is placed. During the curing time, the temperature cannot drop below 32°F. If temperatures drop below 32°F, this time does not count towards the curing requirements.

Any damage done by traffic to the microsurfacing shall be repaired by the Contractor.

(F) Test Strip

A test strip shall be placed with job site materials and approved by the Engineer. The weather and time of day, day or night, during the test strip shall be similar to expected conditions during construction. Upon completion of the test strip the Engineer will approve the mixture for proper curing and placement.

### Measurement and Payment

(A) *Latex Modified Microsurfacing Type* \_\_\_ will be measured along the top surface of the completed work, placed and accepted as specified herein. Payment will be made at the contract unit price per square yard for the type specified, which price will be full compensation for all materials including modifiers and additives, emulsion, aggregate, tack coat, labor, tools, equipment, and all other incidentals necessary to complete the work.

(B) *Latex Modified Emulsion* will be measured and paid at the contract unit price per gallon, which price will be full compensation for all materials including modifiers and additives, tack coat, labor, tools, equipment, and all other incidentals necessary to complete the work.

*Aggregate, Type* \_\_\_ will be measured and paid at the contract unit price per ton which price will be full compensation for all material, including mineral filler, labor, tools, equipment, and maintenance of traffic and all incidentals necessary to complete the work.

Rut filling will be measured and paid at the contract unit price per gallon for *Latex Modified Emulsion* and at the contract unit price per ton of *Aggregate, Type III*. Payment will be full compensation for all materials including modifiers and additives, tack coat, mineral filler, labor, tools, equipment, maintenance of traffic, and all other incidentals necessary to complete the work.

(C) When the contract includes the item of *Removal of Pavement Marking Lines*, the work of removing pavement marking lines will be measured and paid in accordance with Article 1205-10 of the *2012 Standard Specifications*.

When the contract includes the item of *Removal of Pavement Marking Symbols & Characters*, the work of removing pavement marking symbols and characters will be measured and paid in accordance with Article 1205-10 of the *2012 Standard Specifications*.

(D) When the contract includes the item of *Removal of Pavement Marking Lines, Symbols & Characters*, the work of removing pavement marking lines, symbols and characters will be paid at the contract lump sum price for this item.

Microsurfacing will be measured and paid by either (A) or (B) as described herein. Removal of Pavement Marking Lines, Symbols & Characters will be paid by either (C) or (D) as described herein.

Payment will be made under:

**Pay Item**

Latex Modified Microsurfacing Type \_\_

Latex Modified Emulsion

Aggregate, Type \_\_

Removal of Pavement Marking Lines, Symbols & Characters

**Pay Unit**

Square Yard

Gallon

Ton

Lump Sum

# PM-1



DocuSigned by:  
Renee Roach  
B3C6C6F7CF4640D...

6/5/2017

## HOT SPRAY THERMOPLASTIC PAVEMENT MARKING LINES

### **Description**

This work consists of machine applied hot spray thermoplastic pavement marking material with drop-on glass beads. All work shall be in accordance with the applicable requirements of Section 1205 of the *Standard Specifications* and this provision.

### **Construction**

Use application equipment that provides multiple width settings ranging from 4" to 12" and multiple thickness settings to achieve a minimum 50 mil thickness in one pass.

Hand-liners will not be allowed.

All thermoplastic markings shall be of the hot, machine applied type. Application shall be accomplished by spraying methods only.

Produce a cross-sectional thickness of hot spray thermoplastic markings for long line markings only with a minimum thickness of 50 mils without glass beads and/or a minimum thickness of 55 mils with glass beads.

### **Material**

Furnish the following pavement marking material certifications in accordance with Article 106-3 of the *Standard Specifications*:

Hot Spray Thermoplastic Type 3 Material Certification

Extruded type thermoplastic shall not be sprayed.

### **Measurement and Payment**

#### **Pay Item**

Hot Spray Thermoplastic Pavement Marking Lines (\_\_\_", \_\_\_ mils)

#### **Pay Unit**

LF

County: Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>ROADWAY ITEMS</b>						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0255000000-E	SP	GENERIC GRADING ITEM AGGREGATE SHOULDER BORROW	3,332 TON		
0003	1245000000-E	SP	SHOULDER RECONSTRUCTION	23.78 SMI		
0004	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (1-1/2")	12,667 SY		
0005	1330000000-E	607	INCIDENTAL MILLING	1,003 SY		
0006	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	8,070 TON		
0007	1525000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A	4,295 TON		
0008	1526000000-E	SP	ASPHALT CONC SURFACE COURSE, TYPE S4.75A	570 TON		
0009	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	810 TON		
0010	1704000000-E	SP	PATCHING EXISTING PAVEMENT	325 TON		
0011	1814500000-E	SP	ASPHALT SURFACE TREATMENT, SINGLE SEAL	77,269 SY		
0012	1838000000-E	SP	EMULSION FOR ASPHALT SURFACE TREATMENT	27,046 GAL		
0013	1838500000-N	SP	VACUUM TRUCK	3 WK		
0014	4413000000-E	SP	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	1,869 SF		
0015	4457000000-N	SP	TEMPORARY TRAFFIC CONTROL	Lump Sum	L.S.	
0016	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	134,860 LF		
0017	4686000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	92,953 LF		
0018	4710000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	20 LF		

County : Richmond

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0019	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	18,785	LF	
0020	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	816	EA	
0021	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	230	EA	
0022	1891000000-E	SP	GENERIC PAVING ITEM LATEX MODIFIED MICROSURFACING, TYPE II	36,200	SY	
0023	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	54,110	LF	
0024	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM HOT SPRAY THERMOPLASTIC PAVE- MENT MARKING LINES (4", 50 MILS)	54,110	LF	
1547/Jun08/Q529368.78/D66664100000/E24			Total Amount Of Bid For Entire Project :			



PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.08.29.10771	5	
2017CPT.08.29.20771		

### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	FINAL SURFACE TESTING REQUIRED	WARM MIX ASPHALT REQUIRED	LENGTH MI	WIDTH FT	AGGREGATE SHOULDER BORROW TON	SHOULDER RECONSTRUCTION SMI	1.5" MILLING SY	INCIDENTAL MILLING SY	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TON	SURFACE COURSE, S4.75A TONS	ASPHALT BINDER FOR PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	LATEX MODIFIED MICROSURFACING, TYPE II SY	ASPHALT SURFACE TREATMENT, SINGLE SEAL SY	EMULSION FOR ASPHALT SURFACE TREATMENT GAL	VACUUM TRUCK WK	
2017CPT.08.29.10771	Richmond	1	NC 38	FROM SC LINE TO BEG. DIVIDE	1	2	2WU	NO	NO	3.47	21	971.00	6.94		100	3,975			238						
<b>TOTAL FOR MAP NO. 1</b>										<b>3.47</b>		<b>971.00</b>	<b>6.94</b>		<b>100</b>	<b>3,975</b>			<b>238</b>						
2017CPT.08.29.10771	Richmond	2	NC 381	FROM SCOTLAND CO LINE TO SR 1615	3A	2	2WU	NO	NO	2.92	21										36,200				
<b>TOTAL FOR MAP NO. 2</b>										<b>2.92</b>											<b>36,200</b>				
<b>TOTAL FOR PROJ NO. 2017CPT.08.29.10771</b>										<b>6.39</b>		<b>971.00</b>	<b>6.94</b>		<b>100</b>	<b>3,975</b>			<b>238</b>		<b>36,200</b>				
2017CPT.08.29.20771	Richmond	3	SR 1606 (FOX RD)	FROM NC 177 TO US 1	2	2	2WD	NO	NO	3.33	20	933.00	6.66		60		2,960		198	25		39,083.00	13,680	1	
<b>TOTAL FOR MAP NO. 3</b>										<b>3.33</b>		<b>933.00</b>	<b>6.66</b>		<b>60</b>		<b>2,960</b>		<b>198</b>	<b>25</b>		<b>39,083.00</b>	<b>13,680</b>	<b>1</b>	
2017CPT.08.29.20771	Richmond	4	SR 1605 (COGNAC RD)	FROM NC 177 TO US 1	3	2	2WD	NO	NO	1.94	20	544.00	3.88		60	2,105		126	12			22,727.00	7,955	1	
<b>TOTAL FOR MAP NO. 4</b>										<b>1.94</b>		<b>544.00</b>	<b>3.88</b>		<b>60</b>	<b>2,105</b>		<b>126</b>	<b>12</b>		<b>22,727.00</b>	<b>7,955</b>	<b>1</b>		
2017CPT.08.29.20771	Richmond	5	SR 1808 (MCGIRT RD)	FROM SR 1615 (E. MAIN ST) TO SR 1807 (OAK RIDGE CH. RD)	2	2	2WU	NO	NO	1.25	21	350.00	2.50		60		1,170		78			15,459.00	5,411	1	
<b>TOTAL FOR MAP NO. 5</b>										<b>1.25</b>		<b>350.00</b>	<b>2.50</b>		<b>60</b>		<b>1,170</b>		<b>78</b>		<b>15,459.00</b>	<b>5,411</b>	<b>1</b>		
2017CPT.08.29.20771	Richmond	6	SR 1623 (CAMPBELL RD)	FROM SR 1608 (MANHATTAN ST) TO SR 1688 (ATKINSON ST)	4	2	2WD	NO	NO	1.16	20	325.00	2.32		150		570	39	287						
<b>TOTAL FOR MAP NO. 6</b>										<b>1.16</b>		<b>325.00</b>	<b>2.32</b>		<b>150</b>		<b>570</b>	<b>39</b>	<b>287</b>						
2017CPT.08.29.20771	Richmond	7	SR 1475 (MCDONALD CH RD)	FROM JOINT AT US 1 TO PAVEMENT CHANGE	5	2	2WD	NO	NO	0.92	22			12,667	239	1,175			71						
<b>TOTAL FOR MAP NO. 7</b>										<b>0.92</b>				<b>12,667</b>	<b>239</b>	<b>1,175</b>			<b>71</b>						
2017CPT.08.29.20771	Richmond	8	SR 1442 (LEDBETTER RD)	FROM PAVEMENT JOINT NEAR US 1 TO SR 1489 (GRAHAM BRIDGE RD)	6	2	2WU	NO	NO	0.12	22	34.00	0.24		183		165		11						
<b>TOTAL FOR MAP NO. 8</b>										<b>0.12</b>		<b>34.00</b>	<b>0.24</b>		<b>183</b>		<b>165</b>		<b>11</b>						
2017CPT.08.29.20771	Richmond	9	SR 1003 (CADDELL RD)	FROM SR 1475 (MCDONALD CH RD) TO CITY LIMITS OF HOFFMAN	7	2	2WD	NO	NO	0.62	24	175.00	1.24		151	815			49	1					
<b>TOTAL FOR MAP NO. 9</b>										<b>0.62</b>		<b>175.00</b>	<b>1.24</b>		<b>151</b>	<b>815</b>			<b>49</b>	<b>1</b>					
<b>TOTAL FOR PROJ NO. 2017CPT.08.29.20771</b>										<b>9.34</b>		<b>2,361.00</b>	<b>16.84</b>	<b>12,667</b>	<b>903</b>	<b>4,095</b>	<b>4,295</b>	<b>570</b>	<b>572</b>	<b>325</b>		<b>77,269.00</b>	<b>27,046</b>	<b>3</b>	
<b>GRAND TOTAL</b>										<b>15.73</b>		<b>3,332.00</b>	<b>23.78</b>	<b>12,667</b>	<b>1,003</b>	<b>8,070</b>	<b>4,295</b>	<b>570</b>	<b>810</b>	<b>325</b>		<b>36,200.00</b>	<b>77,269.00</b>	<b>27,046</b>	<b>3</b>

PROJECT NO.	SHEET NO.	TOTAL NO.
2017CPT.08.29.10771	6	
2017CPT.08.29.20771		

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LANES	LANE TYPE	LENGTH	WIDTH	4413000000-E	4457000000-N	4685000000-E	4686000000-E		4710000000-E	4810000000-E		4850000000-E	4890000000-E		4900000000-N	4905000000-N
										WORK ZONE ADVANCE/GENERAL WARNING SIGNING SF	TEMPORARY TRAFFIC CONTROL LS	4" X 90 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	4" WHITE PAINT LF	4" YELLOW PAINT LF	4" LINE REMOVAL LF	HOT SPRAY THERMO PAVEMENT MARKING LINES - 4"X 50M WHITE LF	HOT SPRAY THERMO PAVEMENT MARKING LINES - 4"X 50M YELLOW LF	YELLOW & YELLOW MARKERS EA	SNOW PLOWABLE MARKERS Y & Y MARKERS EA
2017CPT.08.29.10771	Richmond	1	NC 38	FROM SC LINE TO BEG. DIVIDE	1	2	2WU	3.47	21	388		37,337	19,000	75								230
TOTAL FOR MAP NO. 1												37,337	19,000	75								230
2017CPT.08.29.10771	Richmond	2	NC 381	FROM SCOTLAND CO LINE TO SR 1615	3A	2	2WU	2.92	21	328								54,110	30,910	23,200	195	
TOTAL FOR MAP NO. 2																		54,110	30,910	23,200	195	
TOTAL FOR PROJ NO. 2017CPT.08.29.10771											1	37,337	19,000	75				54,110	30,910	23,200	195	230
												19,075						54,110				
2017CPT.08.29.20771	Richmond	3	SR 1606 (FOX RD)	FROM NC 177 TO US 1	2	2	2WD	3.33	20	373		35,174	24,144	75								221
TOTAL FOR MAP NO. 3												35,174	24,144	75								221
2017CPT.08.29.20771	Richmond	4	SR 1605 (COGNAC RD)	FROM NC 177 TO US 1	3	2	2WD	1.94	20	218		20,454	14,415	35								129
TOTAL FOR MAP NO. 4												20,454	14,415	35								129
2017CPT.08.29.20771	Richmond	5	SR 1808 (MCGIRT RD)	FROM SR 1615 (E. MAIN ST) TO SR 1807 (OAK RIDGE CH. RD)	2	2	2WU	1.25	21	140		13,250	12,133	25								83
TOTAL FOR MAP NO. 5												13,250	12,133	25								83
2017CPT.08.29.20771	Richmond	6	SR 1623 (CAMPBELL RD)	FROM SR 1608 (MANHATTAN ST) TO SR 1688 (ATKINSON ST)	4	2	2WD	1.16	20	130		11,684	10,809	35								75
TOTAL FOR MAP NO. 6												11,684	10,809	35								75
2017CPT.08.29.20771	Richmond	7	SR 1475 (MCDONALD CH RD)	FROM JOINT AT US 1 TO PAVEMENT CHANGE	5	2	2WD	0.92	22	103		9,391	9,334	60		9,450	9,335					62
TOTAL FOR MAP NO. 7												9,391	9,334	60		9,450	9,335					62
2017CPT.08.29.20771	Richmond	8	SR 1442 (LEDBETTER RD)	FROM PAVEMENT JOINT NEAR US 1 TO SR 1489 (GRAHAM BRIDGE RD)	6	2	2WU	0.12	22	120		1,205	1,067	36								9
TOTAL FOR MAP NO. 8												1,205	1,067	36								9
2017CPT.08.29.20771	Richmond	9	SR 1003 (CADELL RD)	FROM SR 1475 (MCDONALD CH RD) TO CITY LIMITS OF HOFFMAN	7	2	2WD	0.62	24	69		6,365	1,710		20							42
TOTAL FOR MAP NO. 9												6,365	1,710		20							42
TOTAL FOR PROJ NO. 2017CPT.08.29.20771											1	97,523	73,612	266	20	9,450	9,335				621	
												73,878				18,785						
GRAND TOTAL										1	134,860	92,612	341	20	9,450	9,335	54,110	30,910	23,200	816	230	
												92,953				18,785		54,110				